	Application No.	Applicant(s)
Notice of Allowability	10/019,891	OLSSON, BERTIL
	Examiner	Art Unit	
	Thanh-Ha Dang	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *07/25/05*.

2. ☒ The allowed claim(s) is/are *1-5 and 9-24 and now renumbered as 1-21*.

3. ☒ The drawings filed on *04/29/02* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some*   c) ☐ None of the:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

      Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

Response to Amendment

1. Receipt of Applicant's Amendment, filed 25 July 2005, is acknowledged.

2. Applicant's amendments, submitted on 25 July 2005, overcome the rejection of Claim 1 in connection with the 35 USC 101 Claim Rejection. Examiner, hereby withdrawn the rejection that was given on the Office Action dated February 23, 2005.

EXAMINER'S AMENDMENT

3. Authorization for this examiner's amendment was given in a telephone interview with Mr. Nerrie M. Zohn on October 25, 2005. Receipt of Applicant's Proposed Amendment, filed 25 October 2005, is acknowledged.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Amendment to the Title

A Method for Dividing a Coordinate System into a Plurality of Intervals Based on the Distribution of Objects Represented within the Coordinate System.

Amendment to the Abstract

A method for handling a database containing objects extending into a coordinate system, representing a multidimensional reality. The coordinate system is divisible into a plurality of defined, multidimensional intervals. Each time an object is entered into the database, the method determines the multidimensional intervals into which the object extends. For each of these intervals, the method determines the number of objects extending into the interval and compares the number of objects with a predetermined threshold value. If the threshold value is exceeded, the interval is divided into at least two smaller intervals, in order to limit the number of objects within any interval. Each interval is linked to a set of objects extending into that interval, and each object is linked to a set of intervals into which the object at least partly extends.

Amendment to the Claims

1. (Currently Amended) A method for handling a computer database system containing objects that ~~have an extension in~~ extend into a coordinate system representing a multidimensional reality, the coordinate system being divisible into a plurality of defined, multidimensional intervals, the method comprising:

determining, each time an object is entered into the database, ~~which~~ multidimensional intervals into which the object at least partly extends ~~has an extension in~~;

determining, for each of the intervals, the number of objects at least partly extending into the interval ~~having an extension therein~~;

comparing the determined number of objects with a predetermined threshold value; and

dividing, if the threshold value is exceeded, the interval into at least two smaller intervals of equal dimensions, in order to limit the number of objects at least partly extending into ~~related to an extension in~~ any ~~given, defined~~ interval.

2. (Currently Amended) A method as claimed in claim 1, further comprising the step of linking each interval to a set of objects at least partly extending into ~~having an extension in~~ the interval.

3. (Currently Amended) A method as claimed in claim 1, further comprising the step of linking each object to a set of intervals ~~within~~ into which the object at least partly extends ~~has an extension~~.

4. (Previously Presented) A method as claimed in claim 1, wherein the coordinate system comprises at least one time dimension.

5. (Previously Presented) A method as claimed in claim 1, wherein the coordinate system comprises at least spatial dimension.

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Currently Amended) A method as claimed in claim 1, further comprising the step of adjusting the division of intervals when ~~the relation between~~ an object is removed from ~~and an extension in~~ the coordinate system ~~is removed~~.

10. (Currently Amended) A method as claimed in claim 2, further comprising the step of linking each object to a set of intervals ~~within~~ into which the object at least partly extends ~~has an extension~~.

11. (Previously Presented) A method as claimed in claim 2, wherein the coordinate system comprises at least one time dimension.

12. (Previously Presented) A method as claimed in claim 3, wherein the coordinate system comprises at least one time dimension.

13. (Previously Presented) A method as claimed in claim 10, wherein the coordinate system comprises at least one time dimension.

14. (Previously Presented) A method as claimed in claim 2, wherein the coordinate system comprises at least spatial dimension.

15. (Previously Presented) A method as claimed in claim 3, wherein the coordinate system comprises at least spatial dimension.

16. (Previously Presented) A method as claimed in claim 10, wherein the coordinate system comprises at least spatial dimension.

17. (Previously Presented) A method as claimed in claim 5, wherein the coordinate system comprises three spatial dimensions.

18. (Currently Amended) A method as claimed in claim 2, further comprising the step of adjusting the division of intervals when ~~the relation between~~ an object <u>is</u> <u>removed from</u> ~~and an extension in~~ the coordinate system ~~is removed~~.

19. (Currently Amended) A method as claimed in claim 3, further comprising the step of adjusting the division of intervals when ~~the relation between~~ an object <u>is</u> <u>removed from</u> ~~and an extension in~~ the coordinate system ~~is removed~~.

20. (Currently Amended) A method as claimed in claim 10, further comprising the step of adjusting the division of intervals when ~~the relation between~~ an object <u>is</u> <u>removed from</u> ~~and an extension in~~ the coordinate system ~~is removed~~.

21. (Currently Amended) A method for handling a computer database system containing objects that ~~have an extension in~~ <u>extend into</u> a coordinate system representing a multidimensional reality, the coordinate system being divisible into a plurality of defined, multidimensional intervals, the method comprising:

determining, each time an object is entered into the database, ~~which~~ multidimensional intervals <u>into which</u> the object <u>at least partly extends</u> ~~has an~~ ~~extension in~~;

determining, for each of the intervals, the number of <u>extending into the</u> <u>interval</u> ~~having an extension therein~~;

comparing the determined number of objects with a predetermined

threshold value in each interval in which the object has an extension; and

dividing each interval for which the threshold value is exceeded into at

least two smaller intervals, in order to limit the number of objects at least partly

extending into related to an extension in any given, defined interval.

22. (Previously Presented) The method of claim 21, wherein, when the threshold

value is exceeded the interval is divided into at least two intervals of equal

dimensions.

23. (Currently Amended) A computer database system including a memory

containing objects that have an extension in extend into a coordinate system

representing a multidimensional reality, the coordinate system being divisible into

a plurality of defined, multidimensional intervals,

said database system comprising:

means for determining, each time an object is entered into the database,

which multidimensional intervals into which the object at least partly extends has

an extension in;

means for determining, for each of these intervals, the number of objects

extending into the interval having an extension therein;

means for comparing said number of objects with a predetermined

threshold value in each interval in which the object has an extension; and

means for dividing each interval for which the threshold value is exceeded into at least two smaller intervals, in order to limit the number of objects <u>at least partly extending into</u> ~~related to an extension in~~ any ~~given, defined~~ interval.

24.   (Previously Presented) The computer database system of claim 23, wherein, when the threshold value is exceeded the interval is divided into at least two intervals of equal dimensions.

Allowable Subject Matter

1. Claims 1-5 and 9-24 renumbered as 1-21.

The following is an examiner's statement of reasons for allowance: Claims 1-5 and 9-24 are allowable because the prior art made of record does not teach or fairly suggest the combination of elements as recited in independent claims 1, 21 and 23.

Specifically, the prior art of record does not teach:

- determining, for each of the intervals, the number of objects at least partly extending into the interval; and dividing, if the threshold value is exceeded, the interval into at least two smaller intervals of equal dimensions, in order to limit the number of objects at least partly extending into any interval as recited in claim 1.

- determining, for each of the intervals, the number of extending into the interval; and dividing each interval for which the threshold value is exceeded into at least two smaller intervals, in order to limit the number of objects at least partly extending into any interval as recited in claim 21.

- means for determining, for each of these intervals, the number of objects extending into the interval; and means for dividing each interval for which the threshold value is exceeded into at least two smaller intervals, in order to limit the number of objects at least partly extending into any interval as recited in claim 23.

The dependent claims being definite, further limiting and fully enabled by the Specification are also allowed.

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Ha Dang whose telephone number is 571-272-4033. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-4033.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thanh-Ha Dang
Examiner
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Leslie Wong
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